

In response to receiving a signal from the UDF 12, the worker 8a, b, c, d queries (at block 154) the job status table 12 for a job having the input status for the worker. The worker 8a, b, c, d would ignore a call from the UDF 12 received when the worker 8a, b, c, d is actively querying and processing the job status table 12. The worker 8a, b, c, d then determines (at block 156) whether there are any unlocked jobs in the job status table 12 having the input status. If not, then the worker 8a, b, c, d returns to block 150 where it enters sleep mode waiting for the next signal from the UDF 12.

IN THE CLAIMS

The following is a clean version of the entire set of pending claims. In accordance with 37 CFR 1.121 (c)(1)(ii), attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Version with Markings to Show Changes Made."

1. (Amended) A method for processing a job, comprising;
generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;
notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;
processing, with the work process, the job that had its status changed from the first status to the second status; and
modifying, with the work process, the status of the job after completing the processing of the job.
2. The method of claim 1, wherein the signal is transmitted to a routing process and indicates the second status, further comprising:
processing with the routing process a mapping associating each status with one work process in response to receiving the signal; and

determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job.

3. The method of claim 1, wherein job status is maintained in a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein updating the status with the output status generates the signal indicating a change in status.

4. The method of claim 3, wherein the signal is generated by an event trigger in the database that responds to an update to the status of the job in the database table.

5. The method of claim 3, wherein there are multiple work processes each associated with one input status and at least one output status, wherein each work process is enabled to update the job status with one associated output status after completing the processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes, defines the workflow of the job.

6. The method of claim 3, further comprising the work process performing:
determining whether the work process completed processing the job successfully; and
updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully.

7. The method of claim 6, wherein an error work process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process, further comprising the error work process performing:

- performing error recovery operations on the job;
- determining whether the error recovery operations corrected the job; and
- setting the jobs status of the corrected job to a first possible status in the workflow.

8. The method of claim 3, wherein the work process further performs:
querying the database table for jobs having the status associated with the work process;
processing the job having the status associated with the work process;
terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process; and
querying the database table for jobs after receiving the notification.

9. The method of claim 8, wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process.

10. The method of claim 1, wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device.

11. The method of claim 10, wherein at least two work processes process the job at different devices in communication over a network, further comprising accessing the job from another device over the network to process the job at the device on which that work process executes.

12. The method of claim 1, further comprising:
adding a status update to a list providing status updates for each job; and
using the list to determine how the job has been processed by the work processes.

13. (Amended) A system for processing a job, comprising;
means for generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;
means for notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;
means for processing, with the work process, the job that had its status changed from the first status to the second status; and
means for modifying, with the work process, the status of the job after completing the processing of the job.

14. The system of claim 13, wherein the signal is transmitted to a routing process and indicates the second status, further comprising:
means for processing with the routing process a mapping associating each status with one work process in response to receiving the signal; and
mean for determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job.

15. The system of claim 13, wherein job status is maintained in a database table including information on the job, further comprising means for maintaining, with the work process, a connection with the database that enables communication with the database table, wherein the means for modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein the means for updating the status with the output status generates the signal indicating a change in status.

16. The system of claim 15, wherein the signal is generated by an event trigger in the database that responds to an update to the status of the job in the database table.

17. The system of claim 15, wherein there are multiple work processes each associated with one input status and at least one output status, wherein each work process is enabled to update the job status with one associated output status after completing the processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes defines the workflow of the job.

18. The system of claim 15, further comprising:
means for determining whether the work process completed processing the job successfully; and
means for updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully.

19. The system of claim 18, wherein an error process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process, further comprising:
means for performing error recovery operations on the job;
means for determining whether the error recovery operations corrected the job; and
means for setting the jobs status of the corrected job to a first possible status in the workflow.

20. The system of claim 15, further comprising:
means for querying the database table for jobs having the status associated with the work process;
means for processing the job having the status associated with the work process;
means for terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process; and
means for querying the database table for jobs after receiving the notification.

21. The system of claim 20, wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, and wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process.

22. The system of claim 13, wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device.

23. The system of claim 22, wherein at least two work processes process the job at different devices in communication over a network, further comprising means for accessing the job from another device over the network to process the job at the device on which that work process executes.

24. The system of claim 13, further comprising:
means for adding a status update to a list providing status updates for each job; and
means for using the list to determine how the job has been processed by the work processes.

25. (Amended) An article of manufacture for processing a job, the article of manufacture comprising computer usable media including at least one computer program and at least one work process embedded therein that causes at least one computer to perform:

generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;

notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;

processing, with the work process, the job that had its status changed from the first status to the second status; and

modifying, with the work process, the status of the job after completing the processing of the job.

26. The article of manufacture of claim 25, wherein the signal is transmitted to a routing process and indicates the second status, further comprising:

processing with the routing process a mapping associating each status with one work process in response to receiving the signal; and

determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job.

27. The article of manufacture of claim 25, wherein job status is maintained in a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein updating the status with the output status generates the signal indicating a change in status.

28. The article of manufacture of claim 27, wherein the signal is generated by an event trigger in the database that responds to an update to the status of the job in the database table.

29. The article of manufacture of claim 27, wherein there are multiple work processes each associated with one input status and at least one output status, wherein each work process is enabled to update the job status with one associated output status after completing the processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes defines the workflow of the job.

30. The article of manufacture of claim 27, further comprising the work process performing:

determining whether the work process completed processing the job successfully; and
updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully.

31. The article of manufacture of claim 30, wherein one work process is an error work process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process, further comprising the error work process performing:

performing error recovery operations on the job;
determining whether the error recovery operations corrected the job; and
setting the jobs status of the corrected job to a first possible status in the workflow.

32. The article of manufacture of claim 27, wherein the work process further performs:

querying the database table for jobs having the status associated with the work process;
processing the job having the status associated with the work process;
terminating processing of the database table if there are no further jobs in the database
table having the status associated with the work process; and
querying the database table for jobs after receiving the notification.

33. The article of manufacture of claim 32, wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process.

34. (Amended) The article of manufacture of claim 25, wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device.

35. The article of manufacture of claim 34, wherein at least two work processes process the job at different devices in communication over a network, further comprising accessing the job from another device over the network to process the job at the device on which that work processes executes.

36. The article of manufacture of claim 25, further comprising:
adding a status update to a list providing status updates for each job; and
using the list to determine how the job has been processed by the work processes.

REMARKS

Claims 1-36 are pending in the application. Claims 1, 13, 25, and 34 have been amended. The Specification has been modified to correct a figure reference number, but no new